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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/625,904	07/24/2003	Ritsuko Kawasaki	0756-7181	1203
31780	7590	08/14/2007		
ERIC ROBINSON PMB 955 21010 SOUTHBANK ST. POTOMAC FALLS, VA 20165			EXAMINER SEFER, AHMED N	
			ART UNIT	PAPER NUMBER
			2826	
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/625,904

Applicant(s)

KAWASAKI ET AL.

Examiner

A. Sefer

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 25 May 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-4 and 11-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 11-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Allowable Subject Matter***

1. The indicated allowability of claims 11-14, 17, 18, 21 and 22 is withdrawn in view of the newly discovered reference(s) to Adachi ("Adachi") USPN 6.043,512. Rejections based on the newly cited reference(s) follow.

### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 12, 14, 18 and 22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The recitation of claim 12 calling for, "source and drain regions over at least a part of the source and drain regions over the second thickness" is not well understood. For examining purposes, it will be interpreted to read, "source and drain regions over at least a part of the second thickness"

### ***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1, 3 and 15 are rejected under 35 U.S.C. 102(e) as being anticipated by Adachi.

Adachi discloses in fig. 1 a semiconductor device comprising: a light-transmitting substrate 31; a base film 34 having a projection, the film being formed over one surface of the light-transmitting substrate; and an island-like semiconductor layer 35 having a crystal structure covering the projection and extending over a pair of edges of the projection, a gate insulating film 51 over the island-like semiconductor layer; and a gate electrode 52 over the gate insulating film.

Re claim 3, the specification contains no disclosure of either the critical nature of the claimed arrangement or any unexpected results arising therefrom. Where patentability is said to be based upon particular chosen dimensions or upon another variable recited in a claim, the applicant must show that the chosen dimensions are critical. In re Woodruff, 919 F.2d 1575, 1578, 16 USPQ2d 1934, 1936 (Fed. Cir. 1990).

Re claim 15, Adachi discloses (col. 5, lines 62-63) a silicon oxide base film or silicon nitride base film.

6. Claims 2, 4 and 16 are rejected under 35 U.S.C. 102(e) as being anticipated by Adachi.

Adachi discloses in fig. 1 a semiconductor device comprising: a light-transmitting substrate 31; a base film 34 having a projection, the film being formed over one surface of the light-transmitting substrate; a thin film transistor comprising an island-like semiconductor layer 35 comprising a channel formation region (unnumbered), wherein at least a part of the channel formation region being provided over the projection and wherein the island-like semiconductor

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layer covers the projection and extends over a pair of edges of the projection; and a gate insulating film 51 over an island-like layer; and a gate electrode 52 over the gate insulating film.

Re claim 4, the specification contains no disclosure of either the critical nature of the claimed arrangement or any unexpected results arising therefrom. Where patentability is said to be based upon particular chosen dimensions or upon another variable recited in a claim, the applicant must show that the chosen dimensions are critical. In re Woodruff, 919 F.2d 1575, 1578, 16 USPQ2d 1934, 1936 (Fed. Cir. 1990).

Re claim 16, Adachi discloses (col. 5, lines 62-63) a silicon oxide base film or silicon nitride base film.

7. Claims 11 and 13 are rejected under 35 U.S.C. 103(e) as being unpatentable over Adachi.

Adachi discloses in fig. 1 a semiconductor device comprising a light-transmitting substrate 31, a base film 33 having a region of a first thickness and a region of a second thickness over one surface of the light-transmitting substrate, wherein the second thickness is smaller than the first thickness (fig. 3 and col. 7, lines 41-55), and wherein an area of the region of the first thickness is smaller than an area of the region of the second thickness (fig. 3 and col. 7, lines 41-55); and an island-like semiconductor layer (35, 62, 63) having a crystal structure over the region of the first thickness and the region of the second thickness, a gate insulating film 51 over an island-like layer; and a gate electrode 52 over the gate insulating film.

Regarding the recitation calling for, "the island-like semiconductor layer is capable of being irradiated with light ...", it refers to an operational limitation and any such limitation must distinguish from the prior art in terms of structure rather than function, In re Schreiber, 128 F.3d 1473, 1477-78, 44 USPQ2d 1429, 1431-32 (Fed. Cir. 1997); see In re Swinehart, 439 F.2d 210,

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212-13, 169 USPQ 226, 228-29 (CCPA 1971; see also *In re Danly*, 263, F.2d 844, 847, 120 USPQ 528, 531 (CCPA 1959).

Re claim 13, the specification contains no disclosure of either the critical nature of the claimed arrangement or any unexpected results arising therefrom. Where patentability is said to be based upon particular chosen dimensions or upon another variable recited in a claim, the applicant must show that the chosen dimensions are critical. *In re Woodruff*, 919 F.2d 1575, 1578, 16 USPQ2d 1934, 1936 (Fed. Cir. 1990).

8. Claims 12 and 14, as understood, are rejected under 35 U.S.C. 102(e) as being anticipated by Adachi.

Adachi discloses in fig. 1 a semiconductor device comprising: a light-transmitting substrate 31; a base film 33 having a region of a first thickness and a region of a second thickness over one surface of the light-transmitting substrate, wherein the second thickness is smaller than the first thickness (fig. 3 and col. 7, lines 41-55), and wherein an area of the region of the first thickness is smaller than an area of the region of the second thickness (fig. 3 and col. 7, lines 41-55); a thin film transistor comprising a channel formation region, wherein at least a part of the channel formation region is provided over the region of the first thickness; source and drain regions (62, 63) over at least a part of the second thickness, a gate insulating film 51 over the channel formation region; and a gate electrode 52 over the gate insulating film.

Regarding the recitation calling for, "the channel formation region, and the source and drain regions are capable of being irradiated with light ...", it refers to an operational limitation and any such limitation must distinguish from the prior art in terms of structure rather than function, *In re Schreiber*, 128 F.3d 1473, 1477-78, 44 USPQ2d 1429, 1431-32 (Fed. Cir. 1997);

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see *In re Swinehart*, 439 F.2d 210, 212-13, 169 USPQ 226, 228-29 (CCPA 1971; see also *In re Danly*, 263, F.2d 844, 847, 120 USPQ 528, 531 (CCPA 1959).

Re claim 14, the specification contains no disclosure of either the critical nature of the claimed arrangement or any unexpected results arising therefrom. Where patentability is said to be based upon particular chosen dimensions or upon another variable recited in a claim, the applicant must show that the chosen dimensions are critical. *In re Woodruff*, 919 F.2d 1575, 1578, 16 USPQ2d 1934, 1936 (Fed. Cir. 1990).

***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 17 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Adachi.

Adachi discloses the device structure as recited in the claims including a metal oxide base film, but does not specifically disclose a silicon oxide base film or silicon nitride base film.

However, in a case such as this one, where an improvement is no more than “the simple substitution of one known element for another,” *KSR Int’l Co. v. Teleflex Inc.*, 127 S.Ct. 1727, 1740, 82 USPQ2d 1385, 1396 (2007), no further analysis is required of the Examiner. See *Ex parte SMITH*, Appeal 2007-1925, (6/25/07) Slip Op. at 21. Also available at <http://www.uspto.gov/web/offices/dcom/bpai/prec/fd071925.pdf>.

11. Claims 19-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Adachi.

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Adachi discloses the device structure as recited in the claims, but does not specifically disclose a semiconductor device being applied to an electronic instrument listed in the claim.

However, Examiner takes Official Notice that an electronic instrument selected from the group consisting of a personal computer, a video camera or a digital camera is conventional and well known. Therefore, it would have been obvious to one skilled in the art at the time the invention was made to have employed any of the various electronic instruments since Examiner takes Official Notice that due to their low power consumption, displays have become a necessary and indispensable structural element of an electronic instrument.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to A. Sefer whose telephone number is (571) 272-1921.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sue Purvis can be reached on (571) 272-1236.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR.



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Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

ANS  
August 10, 2007



*A. Sefer*  
Patent Examiner  
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